

Application Serial No. 09/869,789
Amendment dated February 16, 2004
Reply to Office Action dated October 22, 2003

Replacement Abstract

Please delete the current Abstract and substitute the following new Abstract therefor:

ABSTRACT

A process for the location-resolved simultaneous detection of the adhesion and friction as well as possibly of other material properties of a sample surface to be examined by means of a raster probe microscope comprising a raster probe. The raster probe and/or the sample with sample surface are moved until at a point of the sample surface to be examined the raster probe interacts in a determined manner with this surface. The raster probe and/or the sample are subjected to a vertical oscillation, and a first measuring signal characterized by the deformation of the raster probe is recorded. A second measuring signal characterizing the deformation of the raster probe is recorded, wherein the raster probe and/or the sample are subjected to a horizontal and/or vertical oscillation. From these two measuring signals the desired material properties are determined. For the detection of the entire surface area to be examined the raster probe and or the sample are again moved and for the repetition of the measuring process described brought into contact with the sample surface in the above described manner.